

OPUS-RS solution : 018773_14_247_A4.14O OP1410273457916

opus <opus@ngs.noaa.gov>

Tue 9/9/2014 8:44 AM

To: John Freetly <John.Freetly@neciusa.com>;

FILE: 018773_14_247_A4.14O OP1410273457916

NGS OPUS-RS SOLUTION REPORT

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All computed coordinate accuracies are listed as 1-sigma RMS values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>USER: john.freetly@neciusa.com
RINEX FILE: 0187247x.14oDATE: September 09, 2014
TIME: 14:43:41 UTCSOFTWARE: rsgps 1.37 RS94.prl 1.99.2 START: 2014/09/04 23:09:35
EPHEMERIS: igr18084.eph [rapid] STOP: 2014/09/05 00:26:20
NAV FILE: brdc2470.14n OBS USED: 3500 / 4170 : 84%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 21.65/ 13.90
ARP HEIGHT: 1.800 NORMALIZED RMS: 0.264

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.67669)

X: -1354927.562(m) 0.009(m) -1354928.421(m) 0.009(m)
Y: -4297510.154(m) 0.012(m) -4297508.899(m) 0.012(m)
Z: 4500746.852(m) 0.009(m) 4500746.809(m) 0.009(m)LAT: 45 9 31.29690 0.006(m) 45 9 31.31747 0.006(m)
E LON: 252 30 3.15134 0.006(m) 252 30 3.09656 0.006(m)
W LON: 107 29 56.84866 0.006(m) 107 29 56.90344 0.006(m)
EL HGT: 1332.874(m) 0.016(m) 1332.181(m) 0.016(m)
ORTHO HGT: 1346.190(m) 0.018(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5003617.953 103008.908
Easting (X) [meters] 303575.489 757295.078
Convergence [degrees] -1.77260022 1.46364875
Point Scale 1.00007443 0.99990845
Combined Factor 0.99986549 0.99969954

US NATIONAL GRID DESIGNATOR: 13TCL0357503617(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	55450.0
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	98311.7
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	108113.8
DJ8992	P033 TENSLEEPTRWY2005 CORS ARP	N435710.415	W1072315.121	134311.3
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	165862.2

NEAREST NGS PUBLISHED CONTROL POINT

Information on nearest mark is not available due to database connectivity issues or has restrictions on when or how it can be published.

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.